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A modified combined relaxation method for non-linear convex variational inequalities

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Abstract

© 2013, © 2013 Taylor & Francis. We consider a class of non-linear problems which is intermediate between equilibrium and variational inequality ones and has many applications. Unlike the usual variational inequality it involves two non-linear mappings, which need not be differentiable. We propose a class of iterative methods for this problem, which converge to a solution under weakened monotonicity type assumptions. This method is simpler essentially in comparison with those for the corresponding non-linear equilibrium problems.

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Keywords

combined relaxation method, equilibrium problems, non-differentiable mappings, non-linear variational inequality, weakened monotonicity